

# Creole on the Cusp

## Phonological Variation and Change in Haitian Determiners

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October 24, 2021

# Outline

- Introduction: Distribution of *LA* in HC
- Methods: LDC Corpus -> Variationist Analysis
- Results: Effect of Vowel Height on Nasal Variants of *LA*
- Conclusion: Variation -> Language Change

# Haitian *LA*

**Haitian Creole (HC)** and other French-based Creoles have the **Postposed Determiner Clitic (*LA*)** that occurs at the right edge of a nominal (DP) constituent and generally indicates specificity (Aboh and DeGraff, 2014: 226–231; Tézil, 2019: 55)

	Guyanese	Haitian, Southern Dominican, Martiniquais, St. Lucian, Trinidadian, Louisianan	Guadeloupean, Northern Dominican
After oral vowels	[a]	[a]	[la]
After oral consonants	[a]	[la]	[la]

The determiner *LA* in the Antillean French-based Creoles (Bernabé, 1983: 14)

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Crosslinguistically, CV ~ V phonological allomorphy in affixes usually has CV allomorphs selecting preceding CV environments (avoiding codas) and V selecting CVC (avoiding vowel hiatus) (Paster, 2006; Bonet et al., 2007; Nevins, 2011).

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Creole languages that alternate both of the base forms have the phonologically induced **Nasalized Postposed Determiner Clitic (*L̃A*)**, with HC having the most variation on record thus far because of **Nasal Forms of Postposed Determiner Clitic in Non-Nasal Contexts (*VL̃A*)** (Syea, 2017; Tézil, 2019). What is it about HC and other Creoles like it that led to such dynamic allomorphy, and how early did this system emerge in the history of HC?

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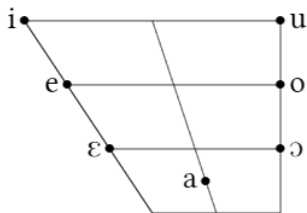
/ane+*LA*/ → [ane.ja] 'the year'

/bato+*LA*/ → [bato.wa] 'the boat'

/papa+*LA*/ → [papa:] 'the dad'

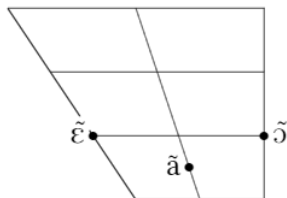
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## Oral Vowels



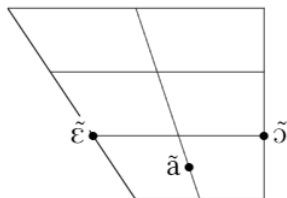
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## Nasal Vowels



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High nasal vowels?



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### 3 LA → [+nasal] after $\tilde{V}$ nucleus

/lāp+LA/ → [lāp.lā] 'the lamp'

/madām+LA/ → [madām.nā] 'the lady'

/fā+LA/ → [fā:] 'the song'

/vwazē+LA/ → [vwazē.ā] 'the neighbor'

# Haitian LA

## ■ Summary (Bhatt and Nikiema, 2002: 36-37)

[la] occurs after lexical items ending in an oral vowel followed by an oral consonant

[a] appears after lexical items that end in an oral vowel

[lã] occurs after lexical items that end in a nasal vowel followed by an oral consonant

[nã] after words that end in a nasal consonant and which contain a vowel which is variably subject to regressive nasalization

[na] can occur after words that end in a nasal consonant and which contain a vowel which is variably subject to regressive nasalization

[ã] appears after lexical items that end in a nasal vowel

## ■ 6 possible forms (HC orthography): *la, a, lan, nan, na, an*

# Free Variation

- (1) a. se pou sa w te rele m pandan nan **klas lan** ['klas.lã]?  
(IBHC/78116IL)  
'is that why you called me while in **the class**?'  
b. m pa jwenn oken moun lan **kay lan** ['kaj.lã] (IBHC/78116IL)  
'I did not find anyone in **the house**'  
c. e marenn ou k te **malad lan**? [ma'lad.lã] (IBHC/20972IL)  
'what about your godmother who was **sick**?'  
d. petèt jan **videyo an** [vide'jo.ã] fèt la? (IBHC/37271IL)  
'maybe the way **the video** was done?'  
e. n ap wè kòman n ap abouti avèk tout sa ke nou **panse an** [pã'se.ã]  
(IBHC/52025OL)  
'we will see how we end up given all that we are **thinking**'

# Variation and $VL\tilde{A}$

- Speakers of HC have been shown to systematically surface nasal forms in the absence of the expected conditioning environment, that is, they variably but regularly produce nasal forms of *LA* following oral nuclei (i.e.,  $VL\tilde{A}$ ) according to language internal and external (social) motivators (Valdman, 1991; Tézil, 2019).

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- Only two studies conducted so far in Haiti by Albert Valdman (1991) and David Tezil (2019).
- Valdman (1991) first discovered a significant effect of age; younger speakers are more likely to nasalize.

# Variation and $VL\tilde{A}$

- Tezil (2019) further identified an effect of gender, education, and environment (urban/rural); moreover, certain features typically found among bilingual speakers can also be found patterning together with nasalized variants in the speech of monolinguals along with the social effects.

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- Tezil also identified linguistic effects such as vowel height and syllable structure; high and CVC contexts are more likely to be nasalized.
- Tezil argues that monolingual speakers have surpassed bilingual speakers in their use of nasalization, and this indicates that the nasalization of *LA* in non-nasal contexts can be seen as the adoption of a prestigious feature.

# Methods

- Rigorous quantitative analysis of variants assuming a hypothesized conditioning effect of independent social or linguistic factors on certain variants (Labov, 1972, 2001; Cedergren and Sankoff, 1974; Sankoff and Labov, 1979); categorical vs. variable contexts.

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- Conditional inference (Tagliamonte and Baayen, 2012) and Multiple Regression (Baayen, 2008; Tagliamonte, 2012: 120–161) using Rbrul (Johnson, 2009).

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- I coded tokens of *LA* following both nasal and non-nasal nuclei for various linguistic properties of their preceding syllable (height, backness, structure) but only included tokens where we should mostly expect variation, that is, I excluded nasal nuclei and nasal codas (I kept nasal onsets).

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- I tested for the significance of dialect, age, sex, nasal segment, vowel height, or syllable structure on the occurrence of nasalized variants in the IBHC corpus, and for the strength of any potential significant effect of a factor against other factors; effect of speaker and lexical word are accounted for as random effects.

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- I will tabulate *LA* vs.  $L\tilde{A}$ , but keep in mind the above E.o.V. and exclusions as we are interested in the contexts conditioning  $V\tilde{L}\tilde{A}$

# Results

Overall distribution of *LA* in non-nasal contexts

Total N = 9789			
<i>LA</i>		<i>L̃A</i>	
%	N	%	N
<b>91.3</b>	8942	<b>8.7</b>	847



# Results

Overall distribution of *LA* in non-nasal contexts across vowel height and syllable structure

	Total N = 9789											
	<i>Open</i>				<i>Closed</i>				<i>Total</i>			
	<i>LA</i>		<i>L<math>\tilde{A}</math></i>		<i>LA</i>		<i>L<math>\tilde{A}</math></i>		<i>LA</i>		<i>L<math>\tilde{A}</math></i>	
	%	N	%	N	%	N	%	N	%	N	%	N
High	<b>19.8</b>	1938	<b>2.7</b>	266	<b>9.3</b>	916	<b>2.8</b>	271	<b>29.2</b>	2854	<b>5.5</b>	537
Mid	<b>25.1</b>	2461	<b>0.88</b>	86	<b>18.0</b>	1765	<b>1.2</b>	113	<b>43.2</b>	4226	<b>2.0</b>	199
Low					<b>19.0</b>	1862	<b>1.1</b>	111	<b>19.0</b>	1862	<b>1.1</b>	111
<i>Total</i>	<b>44.9</b>	4399	<b>3.6</b>	352	<b>46.4</b>	4543	<b>5.1</b>	495	<b>91.3</b>	8942	<b>8.7</b>	847

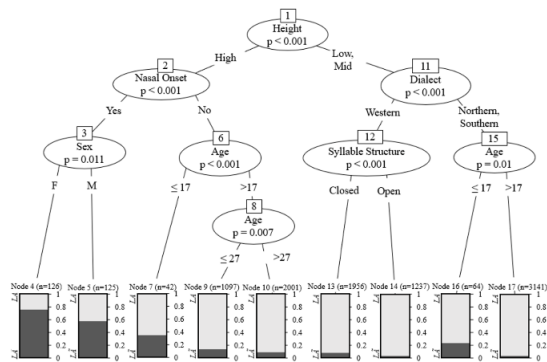
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Overall distribution of *LA* in non-nasal contexts across vowel height and nasal onset

	Total N = 9789											
	<i>Nasal Onset</i>				<i>Non-Nasal Onset</i>				<i>Total</i>			
	<i>LA</i>		<i>L̃</i>		<i>LA</i>		<i>L̃</i>		<i>LA</i>		<i>L̃</i>	
	%	N	%	N	%	N	%	N	%	N	%	N
High	<b>0.9</b>	84	<b>1.7</b>	167	<b>28.3</b>	2770	<b>3.8</b>	370	<b>29.2</b>	2854	<b>5.5</b>	537
Mid	<b>5.4</b>	527	<b>0.1</b>	14	<b>37.8</b>	3699	<b>1.9</b>	185	<b>43.2</b>	4226	<b>2.0</b>	199
Low	<b>1.7</b>	167	<b>0.3</b>	25	<b>17.3</b>	1695	<b>0.9</b>	86	<b>19.0</b>	1862	<b>1.1</b>	111
<i>Total</i>	<b>7.9</b>	778	<b>2.1</b>	206	<b>83.4</b>	8164	<b>6.6</b>	641	<b>91.3</b>	8942	<b>8.7</b>	847

# Results

Conditional Inference Tree; Factors modeled: Sex, age, dialect region, height, backness, syllable structure, nasal onset; minimum bucket sizes  $n=30$



Factors modeled: Sex, age, dialect region, height, backness, syllable structure, onset; minimum bucket sizes  $n=30$

# Results

## Mixed-Effects Multivariate Regression Analysis of $VL\tilde{A}$

	Input prob. Total N	0.05 9789	
	FW	%	N
Social Factors			
<b>Age</b>			
Junior ( $\leq 17$ )	<b>0.74</b>	26	125
Adult (18-27)	<b>0.42</b>	10	3266
Senior (28+)	<b>0.34</b>	8	6398
range	40		
<b>Dialect</b>			
Western	<b>0.57</b>	10	4882
Southern	<b>0.47</b>	9	2466
Northern	<b>0.47</b>	6	2441
range	10		
<b>Sex</b>			
F	[0.52]	9	4361
M	[0.48]	8	5428
range			
Linguistic Factors			
<b>Vowel Quality</b>			
High Non-back	<b>0.80</b>	16	2711
High Back	<b>0.55</b>	14	680
Mid Non-back	<b>0.41</b>	4	2568
Mid Back	<b>0.37</b>	5	1857
Low Central	<b>0.33</b>	6	1973
range	47		
<b>Nasal Onset</b>			
Yes	<b>0.66</b>	21	984
No	<b>0.34</b>	7	8805
range	26		
<b>Syllable Structure</b>			
Closed	<b>0.60</b>	10	5038
Open	<b>0.40</b>	7	4751
range	20		

Random effects: speaker, word; all tested factors included and non-significant factors have bracketed FW

# Results

## Mixed-Effects Multivariate Regression Analysis of $VL\tilde{A}$ across vowel height

		High			Non-High	
	Input prob.	0.28			0.002	
	Total N	3390			6398	
	FW	%	N		FW	%
Social Factors						
Age						
Junior (≤17)	0.69	36	42	[0.80]	21	83
Adult (18-27)	0.46	18	1174	[0.36]	6	2091
Senior (28+)	0.35	14	2174	[0.30]	4	4224
range	34					
Dialect						
Western	[0.55]	17	1688	0.62	6	3193
Northern	[0.45]	12	800	0.48	4	1641
Southern	[0.50]	18	902	0.39	4	1564
range				23		
Sex						
F	[0.51]	17	1547	0.51	5	2813
M	[0.49]	15	1843	0.49	5	3585
range				2		
Linguistic Factors						
Nasal Onset						
Yes	0.87	67	251	[0.49]	5	733
No	0.13	12	3139	[0.51]	5	5665
range	74					
Syllable Structure						
Closed	[0.52]	23	1187	0.66	6	3851
Open	[0.48]	12	2203	0.34	3	2547
range				32		
Backness						
Non-Back	0.59	16	2711	0.59	4	2568
Back	0.41	14	679	0.47	5	1857
Central				0.44	6	1973
range	18			15		

Random effects: speaker, word; all tested factors included and non-significant factors have bracketed FW

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- Conjecture: *LA*-nasalization in (presumably) non-nasal contexts after high vowels is actually a product of a variable rule or constraint in HC phonology that surfaces a high nasal vowel in the preceding stem
- What conditions this high nasal vowel? Definitely a nasal onset, but the higher likelihood of *peyi an* over *peyi a* (“the country”) relative to the likelihood of *kle an* over *kle a* (“the key”), for example, is in need of further insight from sociophonetics



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- While  $VL\tilde{A}$  variants are overall rare occurrences in *LA*, we still observe with them a consistent or systematic pattern of variation
- Language **internal** factors largely explain the variable surfacing of  $VL\tilde{A}$  in preceding high vowel contexts, and the distribution of said variants after non-high vowels correlates mostly with language **external** factors

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- Using larger-scale corpora for analyzing a variable and verifying claims for languages lacking quantitative data tailored for variationist work (e.g., data from sociolinguistic interviews)
- Successfully replicated results from earlier work, while providing new insights on unexplored territory in HC such as the use of *LA* in the Northern region of Haiti
- The study of linguistic variation is fundamental to understanding central issues in the field of pidgin and creole studies (Patrick, 2008)

# Thank You!

# References

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